1003-94

Rheolytic Thrombectomy for the Treatment of Acute Myocardial Infarction in Patients With Angiographic Large Thrombus Burden: One-Year Results of the VeGAS 2 Acute Myocardial Infarction Registry

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Background. The treatment of acute myocardial infarction (MI), in patients (pts) with angiographic evidence of large thrombus burden is difficult. There are scarce data in the literature addressing the optimal management of this high-risk patient population.
Methods and Results. This prospective study enrolled 107 pts (age, 61 ± 12 years, 71% males) presenting with acute ST elevation MI within 24 hours of symptoms onset and angiographic evidence of thrombus. The culprit lesion was located in a native coronary artery in 74.5%, and in a bypass graft in 25.5%. Abciximab was used in 42.1% of the pts. Thrombus area decreased from 97 ± 67 mm2 at baseline to 17 ± 11 mm2 post thrombectomy, to 3 ± 12 mm2 after final treatment. TIMI 3 coronary flow was obtained in 78% after thrombectomy and 87% after final treatment. Procedure success (residual diameter stenosis < 50%, and TIMI 3 flow post-procedure in the absence of in-hospital death, emergent CABG and recurrent Q-wave MI) was obtained in 77% of the patients. Bleeding and vascular complications occurred in 13% and 11% respectively, abrupt or subacute closure in 6.6%, and distal embolization in 6.8%. The in-hospital death and major cardiovascular events (death, Q-wave MI, surgical or percutaneous target lesion revascularization [TLR] or CVA) (MACE) rates were 7.8% and 13% respectively. There were no additional MACE at 30-follow-up after discharge. At one-year follow-up there was an additional 4% mortality, 7.4% TLR, and 1.8% CVA , but no Q-wave MI.
Conclusion. Patients presenting with acute MI and angiographic evidence of large thrombus burden are at higher risk for mortality and MACE compared with historical controls. Rheolytic thrombectomy is very effective in removing thrombus and restoring TIMI 3 coronary flow in this high-risk patient population.

1003-95

Thrombus Aspiration for the Treatment of No-Reflow Phenomenon Complicating Primary Angioplasty for Acute Myocardial Infarction

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Background: Primary angioplasty (PCI) for acute myocardial infarction (AMI) can be complicated by no-reflow or slow-flow phenomenon in nearly 20% of patients. It's not clear which is the best strategy to use when such phenomenon occurs. Intracoronary adenosine and GP IIb/IIIa antagonists have been suggested but their efficacy is not well established. In this study we report our experience with the use of thrombus aspiration as an approach for the treatment of no-reflow complicating primary PCI for AMI.
Methods: Among 239 consecutive primary PCI for AMI performed in our Center, 46 (19%) were complicated by no-reflow or slow-flow phenomenon. All pts received intracoronary GP IIb/IIIa antagonist (abiciximab) soon after culprit lesion was crossed by the guide wire. No-reflow or slow-flow phenomenon occurred soon after balloon inflation or stent deployment at the site of target lesion. Intracoronary adenosine (45 to 60 ug) was given in all 46 pts but no persistent improvement was observed. Thus , thrombus aspiration by Rescue system (Boston Scientific) or by Diver CE catheter (Invatec srl) was attempted in all 42 pts. At least three passages of the aspiration catheter along the culprit vessel were performed in all pts.
Results: Blood flow was restored in 38 patients (82%) with TIMI II/III flow. In 20 pts (52.6%) thrombotic material was aspirated from the culprit vessel as was confirmed by histological analysis. In 6 pts a persistent TIMI I flow was observed after repeated aspiration. No material was aspirated from the culprit vessel in these pts. In 2 pts thrombus aspiration was not successful (persistent no-reflow). No procedural complications device-related occurred . All pts were discharged within 7 days following the procedure. Clinical follow-up was available in all patients . All were event free at 7± 3 months .
Conclusions: These data suggest that no-reflow phenomenon during primary-PCI in AMI pts can be related to massive microembolization of thrombus fragments which might also increase blood viscosity contributing to no-reflow phenomenon. Aspiration of thombotic debris and blood from the treated vessel seems to be an effective approach to restore blood flow and confers an excellent clinical outcome.

POSTER SESSION

1021

Metabolic Diseases, Acute Coronary Syndromes, and Outcomes

Sunday, March 07, 2004, Noon-2:00 p.m.
Morial Convention Center, Hall G
Presentation Hour: 1:00 p.m.-2:00 p.m.

1021-77

Diabetic Patients With Acute Coronary Syndromes Were Undertreated and Had Worse One-Year Outcome

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Background: Previous studies reported different characteristics, management and outcome between diabetic and non-diabetic patients with myocardial infarction (MI). However, the relationship between diabetes and the entire spectrum of acute coronary syndromes (ACS) is less clear.
Methods: The ACS Registry was a prospective observational study enrolling less selected patients with suspected ACS from 51 Canadian centres. In-hospital data were recorded on standard case report forms and one-year outcome was ascertained by standardized telephone interviews. We examined patients with confirmed ACS by pre-existing diabetic status for differences in treatment and outcome.
Results: Of 4578 ACS patients, 1149 (25.1%) had diabetes; they were older, had more cardiovascular risk factors, comorbidities and prior revascularization. (See Table)

	Non-diabetic (N=3429)	Diabetic (N=1149)	P-value
In-hospital Management (%)			
Catheterization	41.0	36.4	0.003
PCI	18.0	12.7	<0.001
Thrombolytics/1°PCI (eligible patients)	62.8	50.3	<0.001
Aspirin	93.2	88.9	<0.001
Heparin	91.4	89.3	0.032
Glycoprotein IIb/IIIa inhibitor	7.6	5.2	0.005
Outcome (%)			
In-hospital mortality	1.8	3.9	<0.001
1-year mortality	7.9	14.4	<0.001

In multivariable analyses controlling for baseline characteristics, diabetes was independently associated with higher 1-year mortality (odds ratio 1.52; 95% CI: 1.18 to1.95; P=0.001); this did not change significantly after further adjustment for use of medications and revascularization.
Conclusions: Diabetic patients with ACS represented a higher risk subgroup with more comorbidities and prior revascularization, but were less likely to receive effective medications or be considered for revascularization. In view of their two-fold increase in mortality, there remains an opportunity to optimize the use of evidence-based therapies in diabetic patients.

1021-78

Increased In-Hospital Mortality After Acute Myocardial Infarction in Patients With Impaired Fasting Glucose

Marianne Zeller, Marie-Claude Brindisi, Gilles Dentan, Yves Laurent, Jean-Claude Beer, Luc Janin-Manificat, Hamid Makki, Isabelle L'Huillier, Jack Ravisy, Mohamed Jolak, Jean-Eric Wolf, Bruno Verges, Yves Cottin, The RICO Survey Working Group, University Hospital, Dijon, France

Objectives : In-hospital mortality after acute MI has not yet been evaluated in patients belonging to the new category of Impaired Fasting Glucose level (IFG), as defined by the American Diabetes Association. **Methods :** Between 1rst January 2001 and 31rst July 2003, all patients hospitalized with acute MI in one region of eastern France participating to RICO survey were included in the study. Fasting blood glucose was measured <3 days after admission. Patients were grouped based on FG concentration : Diabetes Mellitus (DM) (FG > 7 mm/L or clinical history of DM) ; IFG (FG 6.1 to 7 mmole/L) ; NFG (normal FG < 6.1 mmole/L). **Results :** Among the 999 included in the study, 381 (38%) had DM, 145 (15%) IFG and 473 (47%) NFG. Age, cardiovascular risk factors, renal function and MI characteristics were not different between IFG and NFG patients. There was a 2 fold increase of in-hospital mortality in IFG group when compared to normal glucose group (8 vs 4 %, p<0.001). A significant increase in cardiogenic shock (12 vs 6%, p<0.001) and in ventricular arrhythmia (15 vs 9%, p<0.001) was observed in IFG group, as compared to NFG group. Data from the mutivariate analysis showed that increased cardiogenic shock (p=0.007) and ventricular arrhythmia (p=0.014) mostly explained augmented in-hospital mortality in patients with IFG. In our population, IFG, after adjustment for potential confounding factors (age, sex, anterior location, LVEF, CK, reperfusion, multivessel disease and cardiogenic shock), was an independent predictive factor for cardiogenic shock